10

11

12 13

14 15

16

17 18

19

20 21

22

23 24

25

26

27 28

Marine Engineering and received an Ensign's Commission in the U.S. Naval Reserve and an unlimited Third Engineer's License for the Merchant Marine allowing me to sail on any steam-driven or diesel-powered ship of any horsepower. I obtained an unlimited Chief Engineer's License in 1964 for steam-driven vessels and in 1973 I obtained an additional unlimited Chief Engineer's License for dieselpowered ships. I held both licenses until 2011.

- I served for 31 years in the U.S. Naval Reserves as a naval engineer, 3. and retired as a Captain. During that time, I served at sea and in port on dozens of different naval ships, including aircraft carriers, battleships, destroyers, and auxiliary craft. During my service, I was assigned primarily to the machinery spaces.
- I worked at Bath Iron Works Shipyard for 33 years and retired as 4. General Manager of Bath Iron Work's Ship Repair Yard in Portland, Maine, in 1995. Bath Iron Works is a large shipbuilding company at which hundreds of Coast Guard, Navy, and commercial ships have been constructed, repaired and modernized. In addition to performing all of the dockside testing on these ships, as well as serving as Chief Operating Engineer during sea trials, I often accompanied the ships during the first leg of their initial voyage. Furthermore, a number of the merchant ships built Bath Iron Works eventually were sold to the United States Government. I performed a number of two (2) week active duty tours on those ships, during which time I trained the government's marine engineers in the art of operating those vessels. I started at Bath Iron Works as a First Line Supervisor as an operating and test engineer in 1962. My interaction with Navy civilian inspectors during ship construction and overhaul began the day I started at the shipyard. In this role, I spent a minimum of seven and a half hours a day aboard Navy and commercial ships to test systems, deal with contractors if their equipment didn't meet our expectations, and dealing with the U.S. Navy which was a customer of the shipyard. In 1964, I became Assistant Chief Operating

45

6

7

8

1011

12

13

14

1516

17

18

19 20

21

22

2324

25

26

27

28

Engineer until I was promoted to Chief Operating Engineer in 1968. As Chief Operating Engineer, I was responsible for testing and activating for new construction, repair, and overhaul of both commercial and Navy ships. This involved testing of equipment in the propulsion plants and machinery spaces, preparing the ships for sea trials, and taking part in the sea trials as chief engineer. In this role, I was responsible for work on Navy guided missile destroyers, destroyer escorts, frigates, container ships, roll-on/roll-off ships, tankers and dredges.

5. From 1962 to 1989, I regularly stood next to Navy inspectors while they inspected equipment and systems on Navy ships that were either constructed or repaired by Bath Iron Works. From 1962 to 1968, I worked with Navy inspectors on a daily basis. There were approximately 20 to 50 inspectors at the shipyard depending on the workload at the time. It was my job to interpret the contract for the construction or overhaul of a ship with the Navy to ensure that the ship as delivered fulfilled the contract and without going beyond what the contract required. The contracts specified the tests and inspections that were to be performed by Navy inspectors before a ship was delivered. The last six months before delivering a ship to the Navy meant testing almost every piece of machinery and system on the ship, for example, pressure tests on piping systems, performance of most propulsion and auxiliary equipment including pumps, valves, turbines, turbine generators and boilers; lighting system throughout the ship, measuring the capacity of the fans throughout the ship, and noise testing to make sure excess noise isn't in found in areas of the ship that are supposed to be quiet. My role was to supervise the activation and operation of the entire propulsion system and auxiliary machinery. The Navy inspectors did not perform the tests themselves, those tests were performed by Bath Iron Works employees under the supervision of Bath Iron Works. For tests overseen by me, I supervised the crew that performed the tests. Navy inspectors neither performed nor supervised work on

4 5

6

7

8 9

10 11

12

13

14 15

16

17 18

19 20

21

22

23

24 25

26 27

28

Navy ships at Bath Iron Works. As the representative of the private shipyard, my job was to ascertain that the inspectors were satisfied with the ship's constructions and performance while also making sure that the tests and activation program complied with specifications. I would make note of deficiencies found during the tests and inspections so that they would be corrected before delivery of the ship. I would work with the shipyard's engineering department to make sure there was unanimity on interpretation of tests and specifications. Likewise, I worked with US Coast Guard Inspectors doing periodic inspections on the machinery installed aboard commercial ships.

- I was also involved in sea trials for newly constructed ships. Sea trials 6. are considered the first day of a ship's life, it is the first time the ship goes to sea. The purposes of sea trials for a Navy ship is to make sure the ship performs to contract specifications. Navy inspectors were aboard the ship but they were not involved in the operation of the ship. The ship is not operated by Navy personnel during sea trials, this is done entirely by shipyard employees. I was chief engineer during sea trials, which meant the machinery personnel reported to me. Navy employees observed, but did not supervise or control, the operation of the ship including maintenance activities. Sea trials were to make sure that the ship performed as specified in the contract.
- I served as the General Manager, Portland Ship Repair division in 7. Portland, Maine beginning in 1989. From 1990 to 1995 I was a Vice President of Bath Iron Works and General Manager of the Portland Ship Repair Division. While at Bath Iron Works, I worked closely with U.S. Navy, Sea Systems Command on new ship construction, repair, conversions, modernizations and operations.
- 8. In addition, I also served periodically with the Navy Board of Inspection and Survey over approximately fifteen (15) years and was responsible for inspecting and evaluating the equipment in the machinery systems of military

3 4

5 6

7

8 9

10

11 12

13

14 15

16

17 18

19

20

21

22

23 24

25

26

27 28 ships to ensure that such systems were in good material condition and operating and being maintained properly. I have also worked with American Bureau of Ships surveyors and have been responsible for inspecting ship equipment and detailing the overhaul and repair work to be undertaken.

- I served in the Merchant Marines as a marine engineer from 1956 9. until 1962. As a marine engineer in the Merchant Marine, I averaged 12 hours per day in machinery spaces with hands on experience in maintenance and repairing steam systems and all associated equipment. Many of the ships on which I worked during this time period were originally built as merchant ships that had been converted to naval service then returned to commercial use after World War II. These were all steam powered ships. While at the Bath Iron Works Shipyard from 1962 until 1989, I spent the majority of time aboard ship, working engineering spaces, operating, maintaining, repairing, testing, final adjustments, dealing with equipment manufacturers' field service engineers to resolve engineering problems and contractual disputes. While at Bath Iron Works I also served as Chief Engineer on over 100 ships and in excess of 200 sea trials.
- In addition to Bath Iron Works, I have been to many other shipyards 10. to observe their operations, including private shipyards such as National Steel & Shipbuilding Company in San Diego, California, Ingalls Shipbuilding in Pascagoula, Mississippi, Avondale Shipyard in New Orleans, Louisiana and Bethlehem Steel in Quincy, Massachusetts, and every United States Naval Shipyard with the exception of Puget Sound Naval Shipyard. I served as Commanding Officer of Reserve Detachments at both Norfolk Naval Shipyard in Norfolk, Virginia and Portsmouth Naval Shipyard in Kittery, Maine. I have also been aboard four (4) nuclear carrier sea trials as a member of the Navy's Board of Inspection and Survey.
- 11. Throughout my entire career, I have worked with and around all of the equipment located in the machinery spaces of military and commercial ships,

4 5

6

7

8

10

11

12 13

14

15 16

17

18

19

20

21 22

23

24

25

26 27

28

including all insulating materials. I have also worked at numerous shipyards. I am familiar with the work performed both by naval and shipyard personnel on naval and commercial vessels during dry-dock and shipyard overhauls. Based upon this experience, I am personally familiar with the types of equipment installed in the machinery spaces aboard these vessels, including the function of the equipment, such as valves and similar equipment, and the use of asbestos containing materials to insulate equipment, as well as gaskets and packing used in connection with or as part of such equipment. I am also familiar with the proper functioning, maintenance and repair of the equipment installed in the machinery spaces of those vessels. Specifically, I am personally familiar with the proper functioning, proper maintenance, and types of repairs that would be necessary on boilers, pumps, engines/turbines, valves and all other auxiliary machinery used aboard such vessels.

- As explained above, during my career, I had experience at a number 12. of commercial shipyards that built and repaired ships for the U.S. Navy and other governmental concerns, as well as private and commercial vessels. I am familiar with the contracts between the Navy and private shipyards to work on Navy ships. I am also familiar with the role of Navy personnel at a private shipyard.
- Based on my experience with commercial shipyards working on Navy 13. ships, commercial shipyard management was in charge of general operations and management of the shipyard; the Navy did not interfere with shipyard management as to these matters. The day-to-day running of a commercial shipyard by management included planning/scheduling work on board ships and allocation of manpower. Thus, it would be the commercial shipyard, not the Navy, who would schedule workers from different trades, such as pipefitters, boilermakers, machinists, electricians or other contractors, to be in the machinery spaces at the same time as other workers, including but not limited to insulation workers. The same was true for hiring, training, and, where necessary, disciplinary action against

3

4 5

6

7

8

10

11 12

13

14 15

16

17

18 19

20

21

22

23 24

25

26

27 28

workers at the shipyard; those matters were handled by the shipyard, not the Navy. In some commercial shipyards, there were subcontractors who came in to work on various aspects of ship construction and repair, such as boilers, refrigeration, decking, joiner work and pipe insulation. It was the shipyard administration, not the Navy, who supervised the work of the subcontractors working on ships, including insulation subcontractors. It was also the shipyard that arranged for laborers from its cleaning department to clean up dust and debris on ships created by insulation and other construction work. Shipyards had to manage the work of many different specialists across both Navy and commercial work; only the shipyard had the overview and administrative authority to decide the allocation of manpower.

- In my experience, the same was typically true of safety and industrial 14. hygiene practices. They were the responsibility of the shipyard and the Navy did not interfere with a commercial shipyard's institution or enforcement of safety programs at its job sites. At Bath Iron Works, it was Bath Iron works who developed and enforced safety and industrial hygiene programs. The Navy did not do dust counts or provide other ongoing safety or industrial hygiene services at private shipyards. The Navy would raise issues from time to time with private shipyards it contracted with, but viewed those shipyards as being in a collaborative relationship with them. The Navy did not tell private shipyards how to run their safety and industrial hygiene programs. When Bath Iron Works instituted asbestos control policies and procedures, to my knowledge the Navy did not have to approve them first and the Navy did not carry them out, the shipyard did. Based on my experience, I do not believe it would have been any different at National Steel and Shipbuilding Company in San Diego ("NASSCO"), in that the Navy would not have interfered with NASSCO had it attempted to develop and implement an industrial hygiene program to reduce exposures to asbestos.
  - 15. I do not recall ever seeing Navy inspectors performs inspection of

se f.	private shipyards to related to the health and safety of shipyard employees. Talso
2	do not ever recall seeing Navy inspectors conduct any inspections related to any
3	potential asbestos hazards at private shipyards.
4	16. In my experience, the construction and repair of Navy ships involved
5	similar uses of asbestos as that found in commercial ships. At Bath Iron Works,
6	asbestos products such as thermal insulation, packing and gaskets used on Navy
7	ships were standard products used on all ships and were commercially available.
8	I declare under penalty of perjury of the laws of the United States that the
9	foregoing is true and correct.
10	Executed on August 7, 2018 in Farmingdale, Maine.
11	2 NI
12	WILLIAM A. LOWELL, II
13	WILLIAM A. LOWELL, II
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
	8 DECLARATION OF WILLIAM A. LOWELL, II
1	